REMARKS

Reconsideration of the above-identified application is respectfully requested.

Claims 1-17 are pending in the present application.

In the Office Action of December 21, 2004, which has been made FINAL, the Examiner rejected Claims 1-17 under 35 U.S.C. §102(b), as allegedly being anticipated by US Patent No. 5,495,265 issued to Hartman, et al. (Hartman). Applicants respectfully traverse the Examiner's rejections for at least the reasons set forth below. Applicants respectfully submit that independent Claims 1 and 6, as amended, and independent Claims 11, 14, 16 and 17 are patentably distinguished over Hartman and are allowable thereover. Moreover, Claims 2-5, 7-10 and 12-13 and 15 are allowable at least because they depend from an allowable base Claim.

In regard to Claims 1, 6, 11, 14, 16 and 17, the Examiner cites Hartman for teaching that the "overdrive controller 10-21 stores predicted capacitance values and calculates overdrive voltage based on predicted capacitance."

With respect to Claim 1, dependent Claim 3 is being canceled and the subject matter thereof being incorporated wholly within amended Claim 1. Thus, no new matter or new issues are being raised as the Examiner has considered the subject matter of Claim 3. Likewise, with respect to Claim 6, dependent Claim 7 is being canceled and the subject matter thereof being incorporated wholly within amended Claim 6. Thus, no new matter or new issues are being raised as the Examiner has already considered the subject matter of Claim 7 in the Final Rejection.

Respectfully, the subject matter of canceled Claim 3 (incorporated in independent Claim 1) and canceled Claim 7 (incorporated in independent Claim 6) set forth the distinct feature of predicting a capacitance value of a pixel at one frame period later and storing the predicted capacitance value.

Respectfully, Hartman does not disclose an overdrive controller that includes a the step (and means for) predicting a capacitance value of a pixel at one frame period later and storing the predicted capacitance value. In fact, the word "predict" (or any variation thereof) is not to be found in the Hartman reference. Thus, amended Claims 1 and 6 of the present invention can not be anticipated by the Hartman reference in a 35 U.S.C. §102(b) sense.

Hartman rather teaches that a correction voltage V_C is calculated with the formula $V_C = \frac{C(V') \cdot V'}{C(V)}$, wherein V is the previous column voltage and V' is the desired column voltage, and the calculated value of V_C is thereafter stored in a look-up table 20. As illustrated in Fig. 1 of Hartman, an incoming video signal 10 (i.e., a column voltage) is digitized and stored in a memory 13. This signal is corrected by a look-up table 20 and then is loaded in the register 7 after being converted to an analog value.

It is respectfully submitted that nowhere is it taught in Hartman that the voltage dependent capacitance value C(V) is predicted and stored within the look-up table 20. Hartman teaches that the correction value stored in the look-up table 20 is calculated with regards to the voltage dependent capacitance value, but this value has not been previously predicted.

Conversely, within the present invention, a predicted capacitance value is stored in the overdrive controller and thereafter the predicted capacitance value is used for

calculating the overdrive voltage in the next refresh cycle (See Figures 4 and 5 and accompanying discussion at page 12-13 of the present specification).

More particularly, the Examiner had alleged with respect to the rejection of now canceled dependent Claim 3, that the controller predicts a capacitance value and cites a passage at Col. 2, lines 36-48 for supporting this, and further alleged that Hartman teaches storing a predicted capacitance value and cites a passage at Col. 2, lines 47-55 for supporting this. Applicants respectfully disagree. Hartman does not explicitly describe the capacitance value predicting and storing features at all. Rather Hartman describes use of a look-up table in the overdrive circuit 10 that outputs a digitized corrected voltage (Vc) value that takes into account the voltage dependency of the pixel capacitance.

More particularly, it is gleaned from the Hartman reference that data voltages are corrected for capacitance variations of the electro-optical material (liquid crystal material) according to the formula $V_C = \frac{C(V') \cdot V'}{C(V)}$ with the values Vc governed by a relation such as shown in Figure 2. As discussed in Hartman at Col. 5, lines 17-25, it is these Vc values that are programmed into the look-up table and are output based on the input V and V' values. Thus, while the relation shown in Figure 2 may have taken into account the capacitance according to the particular LCD pixel material, there is no current prediction of a capacitance value – much less an additional storage of the value.

With respect to rejected Claim 7, the Examiner had alleged that the controller includes capacitance prediction means and additionally cites Col. 6, lines 17-46. However, this cited passage teaches the compensation for additional capacitance Cx associated with the pixel transistor (e.g., gate-drain characteristic) when the selection pulse V_R is applied at the gate electrode (row voltage) and apparently is obtained the

same way, e.g., by use of a previously programmed look up table (See Col. 6, lines 35-36)

In his response to the Applicants previous arguments filed July 19, 2004, the Examiner again iterates that the overdrive controller stores predicted capacitance values and calculates overdrive voltage based thereon particularly –if implemented by a microprocessor means (e.g., as suggested at col. 5, lines 23-24). However, it is respectfully submitted that there is no teaching or suggestion of a calculating/predicting a capacitance value in a microprocessor register. While a capacitance value dependent upon voltage may be stored in a register while being processed by a microprocessor there is still no teaching or suggestion of predicting the capacitance value in the first instance. Moreover, the reference teaches away of using the microprocessor for calculating the correction voltage as being rather cumbersome.

In summary, Hartman does not in any way teach the prediction or storage of capacitance values. Therefore, it is respectfully submitted that amended Claims 1 and 6, and independent Claims 11, 14, 16 and 17 are patentably distinguishable over Hartman and are allowable and that Claims 2-5, 7-10 and 12-13 and 15 are allowable at least because they depend from an allowable base Claim. The applicant respectfully requests that the rejection under 35 U.S.C. §102(b) be withdrawn.

While entry of this amendment is not a matter of right, Applicants respectfully request that no new substantive issues are presented by the amendment requiring a further search or consideration, and, at a minimum, the claims are, at a minimum, placed in better form for appeal. Thus, entry and consideration of this amendment is respectfully requested.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

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